

WHAT IS CLAIMED IS:

1. A direct cylinder injection-type spark ignition internal combustion engine comprising a spark plug, a cavity formed in the top surface of a piston, and a fuel injection valve for injecting fuel in nearly the shape of a fan having a relatively small thickness so that the fuel collides with a bottom wall of said cavity at an acute angle, wherein, when the fuel injected in nearly the shape of a fan from said fuel injection valve is considered by being divided into a plurality of fuel segments in a radial direction, the bottom wall of said cavity has a plurality of neighboring fuel leading passages for leading said plurality of fuel segments collided toward the side wall of said cavity, the side wall of said cavity has a first fuel deflection passage and a second fuel deflection passage for so deflecting at least two of said plurality of fuel segments led by said plurality of fuel leading passages as to pass near said spark plug, and the depth near the side wall of said cavity in a first fuel leading passage among said plurality of fuel leading passages for leading the fuel segment to said first deflection passage, is smaller than the depth near the side wall of said cavity in a second fuel leading passage among said plurality of fuel leading passages for leading said fuel segment to said second fuel deflection passage.

2. A direct cylinder injection-type spark ignition internal combustion engine according to claim 1, wherein the side wall of said cavity has a plurality of fuel deflection passages for so deflecting all of said fuel segments other than said two fuel segments as to pass near said spark plug, the depth near the side wall of said cavity in said first fuel leading passage is the smallest, and the depths near the side wall of said cavity in said neighboring fuel leading passages gradually change.

3. A direct cylinder injection-type spark ignition internal combustion engine according to claim 1, wherein said first fuel leading passage is closer to said spark plug than said other fuel leading passages.